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ABSTRACT

The recent trend toward a greater emphasis on career education for life preparation has brought with it the need for more accurate and appropriate information about self, environment, and the world of work. This publication was prepared to help the classroom teacher in identifying and assessing the various types and sources of occupational information available from government agencies, publishers, organizations, schools, and other sources. It is not intended to be an exhaustive compilation of all available materials but rather to provide representative titles in the various resource areas as well as media for presenting occupational information. The contents provide an overview of the role of occupational information in career education and career development. Included are illustrations of a decision-making model and a career education model. Occupational information sources are identified, as are guidelines for assessment of the information. (MF)

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REVIEW AND ANALYSIS OF SOURCES OF OCCUPATIONAL INFORMATION FOR CAREER EDUCATION

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CLEARINGHOUSE ON VOCATIONAL
AND TECHNICAL EDUCATION

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REVIEW AND ANALYSIS OF SOURCES OF OCCUPATIONAL INFORMATION FOR CAREER EDUCATION

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INTRODUCTION

Occupational information has become a point of much concern during the past few years. This is true in the educational setting, business and industry, and the employment service. During this period, we, as a society, have been doing much reexamination of our whole value system. This is particularly true of work values and the role of the home and school. In part this has been prompted by the lack of success in school by many youth, and even greater concern by those who complete a four year or graduate degree and are still either unprepared to enter the labor market or find their particular field of endeavor filled. An outcome of this reexamination has been the introduction of a new emphasis on career education with the inherent components of career development and decision-making. Hoyt, et al. (1972) has noted that two of the most crucial decisions which face the majority of the population are the choice of a marriage partner and a career. These are approached with the least amount of information of all life decisions. The "Accident" theory of vocational choice has for some years been postulated as one of the more prevalent means of career decision-making. Considerable support for this approach can be documented by both new workers and those who have been through a variety of occupational experiences.

The recent trend toward a greater emphasis on career education to enhance one's preparation for life decisions has brought with it the subsequent need for greater amounts of and accuracy of information about one's self, his environment and the world into which he intends to move. This need for information is particularly apparent as it relates to the world of work.

The concept of occupational information is not new. Williamson notes that as early as the mid-18th century, British parents were instructed of their responsibilities in providing their children appropriate information with which to make their business or apprenticeship choices. Ginzberg (1971) reports 1907, when Frank Parsons developed the Vocational Bureau in the Civic Service House in Boston, as the generally accepted date for the beginning of institutionalized vocational guidance. These efforts were followed by various approaches including the American Council on Education's 1940 publication of Matching Youth and Jobs. The problem faced is not the lack of occupational information, but a larger problem, that of assuring the accuracy and appropriateness of the information to the students with whom we are working. Just as with other kinds of information, the quality of occupational information varies considerably.

The goal of a majority of individuals in our society is to develop a person who is able to function somewhat independently, taking responsibility for the decisions he makes. This implies skill in the decision-making process. Marland said it this way:

> ...life and how to live it is the primary vocation of all of us. And the ultimate test of our educational process, on any level, is how closely it comes to preparing our people to be alive and active with their hearts and their minds, and, for many, their hands as well (1971:22).

Emphasis on decision-making only serves to reemphasize the need for accurate, updated, available, usable information. Because of the role which occupational information plays in the career development and decision-making processes, teachers, counselors, and students must be knowledgeable about the types and sources of occupational information. Besides the parents, teachers have the initial, most immediate and ongoing contacts with students. They are in the most viable position to provide this information or access to it and therefore must be well informed.

The purpose of this publication is to assist you, the classroom teacher, in the most difficult task of identifying and assessing the various kinds and sources of occupational information. This is not intended to be a "how to do it" manual, a compilation of all the titles, or to in any way exhaust the vast number of pieces of occupational information available or appropriate to your particular situation. It will provide you with representative titles and include the various types and sources of materials as well as media for presenting occupational information. The contents provide an overview of the role of occupational information in career education and career development. Included are illustrations of a decision-making model and a career education model. Occupational information sources are identified, as are guidelines for assessment of occupational information. Consideration has been given to the strengths and weaknesses of various types and sources of occupational information.

OCCUPATIONAL INFORMATION NEEDS OF CAREER EDUCATION

In this day of rapid change, if one thing is certain, it is uncertainty. Changes in values, technology, occupations, and skill levels are among the more crucial ones. The sixth report of the National Advisory Council on Education (1972) supports this contention in noting the fact that youth might expect to change occupations from five to seven times during their working life. If this is true, preparation for adaptability is critical.

The new direction and emphasis in education provided by the current career education emphasis focuses on the total school experience as a part of the career development process. Much has been said and written about "making education relevant," particularly the recommendations to "include real life experiences in the curriculum," and "prepare young people to 'do' something." All of this suggests that a major goal of the school experience should be a readiness on the student's part to face the complexities of our society with the skills necessary to work, to participate as a responsible citizen, a family member, to know how to use the much anticipated leisure time, and to make the decisions that are an integral part of it all.

Decision-Making

Hoyt, et al. (1972) support the premise that career development is a lifelong process involving several successive occupational choices. Ginzberg (1972:172) puts it this way, "occupational choice is a lifelong process of decision-making in which the individual seeks to find the optimal fit between his career preparation and goals and the realities of the world of work."

It seems appropriate, then, to consider, if only briefly, the decision-making process itself as it relates to career development. Decision-making can be defined as a process in which a person selects from two or more possible choices. Wherever a choice exists, a decision follows.

A Model

Decision-making as a process has the basic components of goals, data alternatives, values and interest, outcomes, evaluation, and choice. Gelatt (1962) developed a decision-making model incorporating these basic components and suggested the potential for cycling back through the process. Figure 1 illustrates an adaptation of that model:

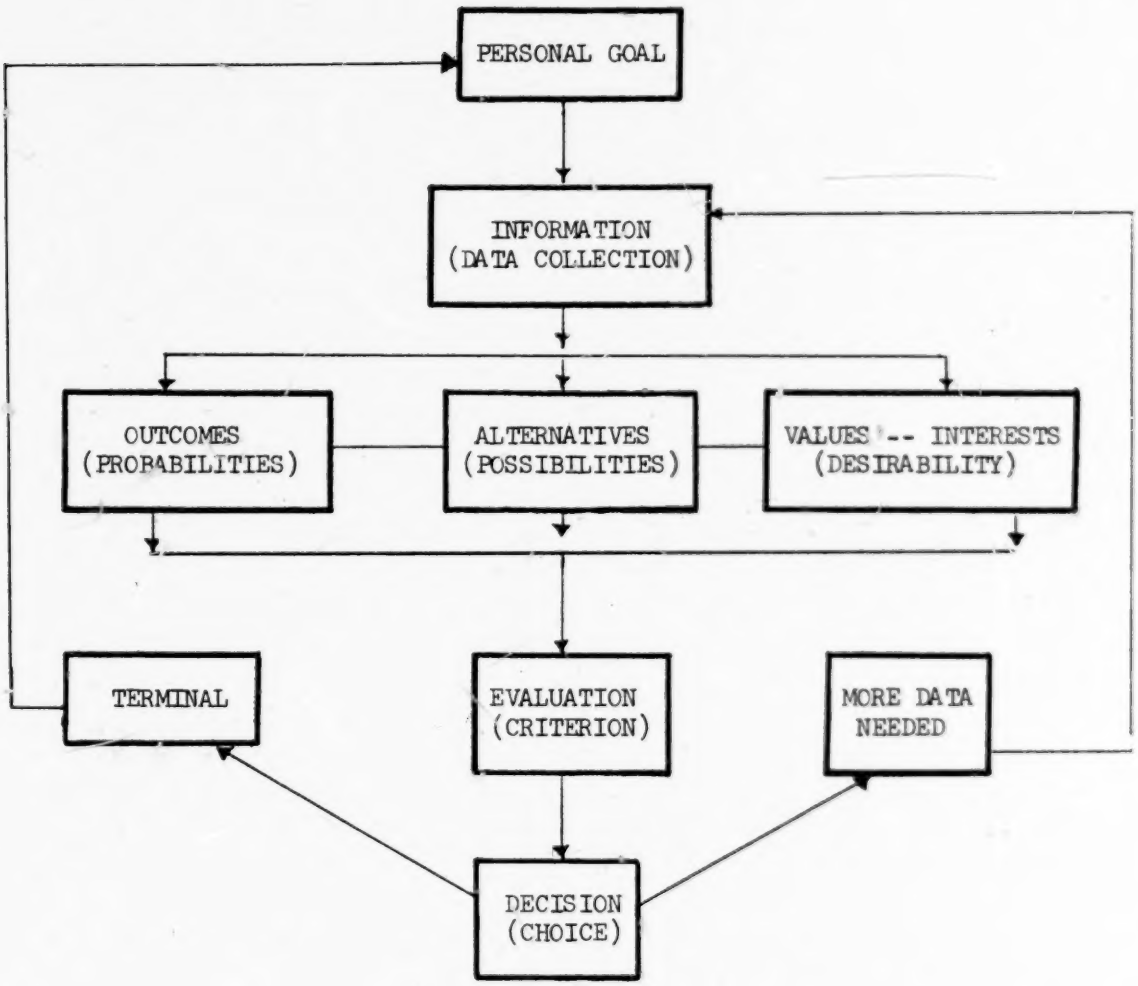

Fig. 1.--Decision-Making Model

As a goal-oriented approach, this model requires the individual to:

1) identify a goal;
2) collect data, including information about himself (values, interests, aptitudes), alternatives and potential outcomes (these latter involving occupational and educational information);
3) evaluate the data; and
4) make a choice either to take action toward the goal, gather more information, or select a new goal.

In the case of the latter two choice options, the process recycles through to the choice point again.

Some assumptions which are related to any good decision-making model then would be (1) the collection and utilization of relevant reliable data, (2) an increased capacity for subsequent decisions and (3) the acceptance of responsibility for the decision. There is concern on the part of some for losing the freedom of choice as one defines the decision-making process more precisely. Gelatt, et al. (1971:2) contradict this in stating, "...the student has more free choice since he is aware of more alternatives and has an increased understanding of the factors involved in choices including his determination of the desirability of the consequences."

The role of information is key in any decision-making process. Ryan and Zeran (1972) suggest that an individual's ability to make wise decisions is highly dependent upon the experience and information that is available to him.

Gelatt, et al. note that "...most decision-makers experience a discrepancy between information that is known and information that is needed" (1972:12). Further, they identify the real test of a decision-making process by asking if it works in the real world.

Many times vocational guidance programs, whether within or outside the classroom, have placed the stronger emphasis on information than on decision-making skill. This author wishes to provide a balance by showing the necessity of both and reinforcing the need for decision-making skills along with appropriate occupational information in the overall career development process.

Morrill and Forrest support the need for skill development in decision-making by stating:

> It is evident that a decision involves much more than merely having relevant and accurate educational and occupational information; such an approach focuses on

factors external to the individual and ignores the process within the individual (1970:300).

Further:

> ...the individual needs much more than the facts to make a wise decision; he needs assistance in acquiring an effective way to approach decision-making problems (1970:300).

Gelatt, et al. (1972:12) identify our "capacities," "environment," and "willingness to do" as limiting factors on our decisions. They go on to suggest three major requirements of skillful decision-making as:

a) examination and recognition of personal values.
b) knowledge and use of adequate, relevant information.
c) knowledge and use of an effective strategy for converting this information into an action (1972).

Career Development

Career development is a process, rather than an event, encompassing the total life span. Career education, though taking numerous forms, is the vehicle for the events critical to an effective career development pattern. Most authors agree with a conceptualization of career education as a comprehensive program integrated throughout the entire educational experience. Though some variance exists among the models of several of the states and the U. S. Office of Education (1971) model, there is more agreement than difference. Among the generally accepted elements of a complete career education program are the stages of awareness, orientation, exploration, preparation, specialization, and continuing education and training available throughout life. Some models combine the orientation and exploratory stages, and/or place a much stronger emphasis on guidance and counseling as an interwoven thread throughout the program. Figure 2 illustrates the U. S. Office of Education Model (1971).

Among the several theories of career development, Ginzberg (1972) suggests a model of occupational choice which quite nearly parallels the career education model. He divides the process into three periods as follows: (1) fantasy (below 11 years); (2) tentative (between 12 and 17 years), with a breakdown into the interests, capacities, and value stages; (3) realistic (17 years and beyond) with a breakdown into the transition, exploratory, crystallization and specification stages).

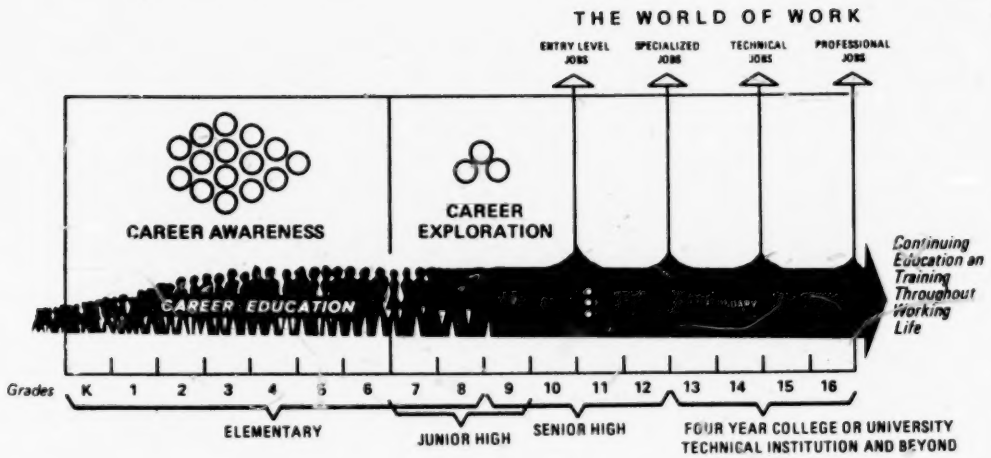

Fig. 2.--U.S. Office of Education
Career Education Model

Ginzberg's "fantasy" period fits closely with the "awareness" stage (Grades K-6) of the career education model. The common emphasis here is the opportunity to take advantage of a child's natural curiosity, imagination and enthusiasm, which allow him to cover the broad range of occupational opportunities. He can become in his mind whatever he wishes and thus change his role quite easily. The career education emphasis during this stage focuses on the development of positive attitudes toward work with respect and appreciation for workers in all fields. A further objective is awareness of the many occupational settings and the self in relation to the occupational roles. A final objective is a tentative choice of career clusters for exploration during the middle years.

Ginzberg's "tentative" period is somewhat broader than the orientation/exploration stage (grades 7-10) of career education. In identifying stages of interests, capacities, and values, Ginzberg compliments an objective of the career education emphasis on the student learning about himself. Some difference between the two models can be noted when Ginzberg puts the exploratory activity into his third period (realistic, 17 years and over). The difference is not so much a real disagreement as it is the fact that Ginzberg is describing in a theory what has been true over the years. The current emphasis in career education is designed to correct this practice of delaying the exploratory experience to allow a student to concurrently learn about himself and the occupational opportunities. An ultimate objective of the exploratory stage in career education is the selection of one or more clusters to explore in depth and experience at least minimally as a part of the process of finding the occupation which suits him best.

Tyler (1969) suggests that the exploratory experience is a process of using occupational information in the search for promising alternatives. She recommends well-prepared descriptions of occupational situations, films, field observations, and opportunities to visit with workers as appropriate types of occupational information for this exploration.

In the third (realistic) and final period, Ginzberg sees the exploratory stage as a kind of final check of alternatives, the crystallization stage as the time to determine his choice, and the specification stage as delimiting that choice. This period basically covers the career education stages of preparation (grades 11-12), specialization (grades 13 and beyond) and the continuing education/retraining. The common objectives here involve the process of narrowing the choice to at least a job family and eventually a specific occupation for which the student can develop the necessary knowledge and skill for job entry. Further specialization may occur by refining that choice either in the training setting or on the job, the latter possibly requiring retraining.

Ginzberg capsulizes the decision-making process of career development in stating,

> ...every occupational choice is of necessity a compromise, reflects the fact that the individual tries to choose a career in which he can make as much use as possible of his interests and his capacities in a manner that will satisfy as many of his values and goals as possible. But in seeking an appropriate choice, he must weigh his opportunities and the limitations of the environment, and assess the extent to which they will contribute to or detract from his securing a maximum degree of satisfaction in work and life (1972:99).

Occupational Information

Career development is an integral part of career education, encompassing all of one's educational experiences. Career decision-making is an aspect of career development with occupational information as a necessary ingredient. Ginzberg lends support to the role of information in this process in stating, "Sound decision-making implies that an individual has reliable information about his alternatives and some indication of the consequences of opting for one over the other" (1971: 186). There are two aspects of information; content and process. The former concerns the facts, while the latter involves the way the facts are presented. These complementary aspects of information cannot be totally separated. To place occupational information in its proper perspective, Ryan and Zeran have very adequately defined it as:

> ...valid and usable data about positions, jobs, and occupations, including duties, requirements for entrance, conditions of work, rewards offered, advancement pattern, existing and predicted supply of and demand for workers, and sources for further information (1972:34).

The need for occupational information to be available at the key time and in a way in which it can be assimilated is a matter of common agreement. To reinforce this apparent need of a more realistic picture of the world of work on the part of students, one need only consider some of the obvious discrepancies between opportunities and choices on the part of young people today. A report in the Career Education Handbook (Olympus Research Corporation, 1972) indicates that only 20 percent of the future jobs will require a four year degree. Nationally, approximately 50 percent of the students prepare for a four year college degree program. It follows then that since less than one-half of those entering four year college programs would be able to find jobs at a level commensurate with their training level, consideration must be given to the motivation of their choice. Further, one must be concerned with their adequacy of accurate information at a time when career planning and specification in their training were occurring. At the community college level, reports range from 50 to 80 percent of the entering students identifying themselves as planning for transfer to a four year college, while in fact only 20 to 30 percent actually transfer. This kind of decision-making, which appears not to be based on accurate occupational facts, only serves to highlight what has come to be common practice.

Counselors have sometimes been used as scapegoats for the unrealistic view students have had of the world of work and of themselves. In reality our entire society has placed high value on academic education without regard as to whether or not a person was actually prepared

to qualify for a job. While a student should not necessarily avoid a four year college education, he should not be misled into thinking that it prepares him to enter a job or make a higher salary. Also, in some cases, there has been little regard as to whether or not the individual would gain personal satisfaction from opportunities for which he was prepared.

One of the gaps in exposing children to a cross section of society and occupational opportunities has been the elementary textbook. Only recently have we begun to present people from the full range of occupations. Elementary school teachers have for some time done an excellent job of exposing children to the services in our communities, but often have neglected considering the "hands that make them go." In a society that prides itself on being people oriented, we have not injected the human element into education nor an appreciation of a job well done.

We can no longer depend on children being exposed to the world of work through family experiences, as per the early days of our country. Hoyt, et al. (1972) note that many young people do not have the benefit of a working person in their family to emulate. Even in cases where there are worker role models within the family, few children have the privilege to observe a significant adult in a work setting. This places an ever-increasing responsibility on the school to provide these experiences and to insure some realistic exposure to the world of work. The role of the teacher is paramount in providing adequate occupational information along with appropriate experiences which will assist the student in his use of decision-making skills early in his career development. There are those in the educational community who fear emphasizing career decisions at any of the early stages of career development due to their concern that decisions made at this time might be permanent rather than tentative.

Since individuals tend to accept information from those who are important to them, and since it must be geared directly to their needs in order for it to be useful, the teacher serves as a critical factor in this all-important process. The difficulty of the task is compounded by the multiplicity of student experience levels, and levels of abilities and talents, as well as the variety of socioeconomic and cultural backgrounds which students and teachers bring to the classroom.

The task of providing usable and meaningful information directly where it can be useful is difficult. Minor, Meyers and Super (1972) suggest that the problem stems in part from the difficulty of managing the numerous complex categories of information about the world of work along with the pertinent educational opportunities and relevant personal factors.

In summary, decision-making skills can be taught and must be learned if students are to succeed in this age of uncertainty. Within the continuous process of career development, occupational information is required for a student to make career decisions consistent with his needs and interests. Career education is encompassed in all education; therefore each classroom teacher is faced with the responsibility of providing occupational information at the time and place of need in a usable fashion.

SOURCES OF OCCUPATIONAL INFORMATION

Essentially, occupational information involves job facts designed to assist the individual to gain insight and understanding of the world of work. More often the focus is on what the worker does with less attention given to psycho-social factors about the job. For effective career development the instructor must have appropriate information available at the time it is needed.

One need take only a cursory look in school libraries, counselors' files, educational advertising, and publication lists to realize the abundance of printed occupational information. Occupational information is developed on national, state, county, and local levels. It is presented in numerous forms, e.g., books, journals, magazines, newspapers, pamphlets, monographs, briefs, leaflets, films, filmstrips, posters, tapes, computers, and microfilm readers, as well as research documents. This information originates with individuals, newspapers, government agencies, commercial publishers, educational institutions, organizations, e.g., unions, councils, professional groups, and other varied sources.

The need for some means of identifying appropriate information sources is obvious, particularly as one considers the time and energy required to evaluate all materials and sources of these materials that are available.

Primary and Secondary Sources

A primary source of occupational information is the individual worker. Many students in elementary school cannot identify their own parents' occupations nor give the specific duties related to these jobs. The most obvious and immediate workers are: teachers, along with other school staff, e.g., the custodian, cook, secretary, delivery man, and parents. Other readily available individuals are community workers, e.g., policemen, firemen, recreation directors and mail carriers. Workers

in business and industry are often most willing to share information about their jobs. Isaacson (1971) suggests a further primary source besides the worker as the employer and the licensing or certifying agency. A considerable amount of gathering of occupational information from primary sources can be done by the students or school staff. A variety of processes are being used in many communities and are available to all by giving some attention to learning the necessary skills of job analysis, community survey, and follow-up survey. These can all be designed to utilize a primary resource, the worker or the employer.

Secondary sources of occupational information usually include processed or published information. It may be provided by an individual who is serving in a guidance role. Secondary sources include:

1) Employment agency personnel including placement officers having extensive contact with employers.

2) School counselors who are knowledgeable in many aspects of job related facts.

3) Personnel managers from business and industry who can relate facts about the job along with employer expectations.

4) Manpower information clearinghouse coordinators, a relatively new type position working with labor market information to provide educational program planners with information needed in establishing the appropriate new training programs.

Agencies

One of the most prolific developers of occupational information is the federal government. The following is a list of agencies and representative titles of some of their more prominent publications.

1) U. S. Department of Labor:

Area Trends in Employment and Unemployment
Manpower Administration
Washington, D.C. 20210

Dictionary of Occupational Titles (U.S. Government Printing Office)
Manpower Administration
Washington, D.C. 20210

Manpower Magazine
Manpower Administration
Washington, D.C. 20210

2) Women's Bureau, U.S. Department of Labor:

Handbook of Women Workers
Women's Bureau
Washington, D.C. 20212

Job Finding Techniques for Mature Women
Women's Bureau
Wage and Salary Standards Administration
Washington, D.C. 20212

3) Bureau of Labor Statistics, U.S. Department of Labor:

A Counselor's Guide to Manpower Information, An Annotated Bibliography of Governmental Publications
Superintendent of Documents
U.S. Government Printing Office
N. Capital and H Streets, N.W.
Washington, D.C. 20401

Occupational Outlook Handbook
Superintendent of Documents
U.S. Government Printing Office
N. Capital and H Streets, N.W.
Washington, D.C. 20401

Jobs for the '70's
Superintendent of Documents
U.S. Government Printing Office
N. Capital and H Streets, N.W.
Washington, D.C. 20401

4) Manpower Administration Information Office:

Occupational Briefs Guide for Young Workers
Superintendent of Documents
U.S. Government Printing Office
N. Capital and H Streets, N.W.
Washington, D.C. 20401

Guide to Local Occupational Information
Bureau of Employment Security
U.S. Employment Service
Washington, D.C. 20401

Job Guide for Young Workers
Manpower Administration
Washington, D.C. 20210

5) U. S. Department of Commerce:

United States Industrial Outlook 1972 with Projections to 1980
Superintendent of Documents
U.S. Government Printing Office
N. Capital and H Streets, N.W.
Washington, D.C. 20401

Most state or local employment offices distribute some type of occupational guides to careers. California has one of the most complete with a list of approximately 400 titles. Several states have developed and are distributing mini-guides. These are concise, attractive, graphically illustrated pamphlets available through state or local employment service offices. In some cases they are printed in more than one language. Ryan and Zeran (1972) note that most states are involved in skill surveys which are being presented under the title of Area Occupational Projection Surveys which can be obtained through the state employment service offices. An example of a further service is the State of Oregon Employment Service Bulletin from the Apprenticeship Information Center featuring information on recent trends and events in the apprenticeship field. Contact with the local and state employment offices as well as the various divisions of the U. S. Department of Labor will provide a wealth of materials at minimal or no cost.

Publishers

Commercial publishers present a rather broad range of materials including most of the types indicated in the introductory paragraphs of this chapter. A list of the major companies follows with those having subscription options indicated by asterisks.

1) American Guidance Services, Inc.
Publishers Bldg.
Circle Pines, Minnesota 55014

2) Bellman Publishing Co.
P. O. Box 172
Cambridge, Massachusetts 02138

*3) B'nai B'rith Vocational Service
1640 Rhode Island Ave. N. W.
Washington, D.C. 20036

*4) Careers
P. O. Box 135
Largo, Florida 33540

5) Children's Press
1224 West Van Buren Street
Chicago, Illinois 60607

*6) Chronicle Guidance Publications, Inc.
Moravia,
New York 13118

7) Educators Progress Service, Inc.
Randolph, Wisconsin 53956
(Educators Guide to Free Guidance Materials)

8) Guidance Associates
Harcourt Brace Jovanovich, Inc.
Pleasantville, New York 10570

9) J. G. Ferguson Publishing Co.
6 North Michigan Ave.
Chicago, Illinois 60602

10) National Vocational Guidance Association
(for N. V. G. A. Current Career Information)
American Personnel and Guidance Association
1607 New Hampshire Ave. N. W.
Washington, D. C. 20009

*11) Science Research Associates, Inc.
259 East Erie Street
Chicago, Illinois 60611

12) Vocational Guidance Manuals
235 East 45th Street
New York, New York 10017

A new development available starting as of August, 1972, is the National Career Information Center, sponsored by the American Personnel and Guidance Association. A subscription is possible which includes a newsletter entitled "Inform" and an additional publication, "Career Resource Bibliographies," among other resources.

Insurance Companies

Ryan and Zeran (1972) identify a list of six insurance companies which have occupational materials. They are:

1) Equitable Life Assurance Company of the United States
1285 Avenue of the Americas
New York, New York 10019

2) John Hancock Mutual Life Insurance Company
200 Berkley Street
Boston, Massachusetts 02117

3) Metropolitan Life Insurance Company
Madison Avenue
New York, New York 10010

4) New York Life Insurance Company
51 Madison Avenue
New York, New York 10010

5) Prudential Insurance Company of America
Education Department
Box 36, Prudential Plaza
Newark, New Jersey 07101

6) Sun Life Insurance Company of Canada
One North LaSalle Street
Chicago, Illinois 60602

Organizations

Many organizations, professional groups, and training institutions have developed materials related to their particular field. Ryan and Zeran (1972) in their recent publication identify a representative group. Some of them follow.

1) A Career for You in the Comics
The Newspaper Comics Council, Inc.

2) A Career in Ecology
The Ecological Society of America

3) Careers in Aerospace Medicine and Life Science
The Aerospace Medical Association

4) Bricklaying, A Career with a Future
Structural Clay Products Institute

Schools

The school library in most cases holds a wealth of printed material, both fiction and nonfiction. One problem is the lack of identification and failure to relate these materials to particular levels or topics. In many communities across the country, teachers and counselors are working together in identifying and classifying bibliographies for more efficient and effective utilization of what already exists at hand. This process also provides the foundation on which to build through the addition of other books, magazines, etc.

An example of three such compilations follow.

1) SJTOE Reference Materials.
Huntsman, Robert, and Gilbertson, Eugene
Unpublished paper, Seaside Public Schools
Seaside, Oregon.

2) K-12 Guide For Integrating Career Development Into Local Curriculum.
Irier, Harry N., Jr., and Associates
Charles A. Jones Publishing Company
Worthington, Ohio

3) A Directory of Field Trip and Speaker Resources Guide For Teachers, Consultants and/or Coordinators.
Guidance and Counseling Department, 1969-70.
Federal Way, Washington.

Media, Simulation, Games and Kits

Among the various media, computers have begun to move beyond the purely experimental stage, taking a place of their own as a source of occupational information. Two of the major advantages of the computer are the considerable storage capacity for information, and the rather easy access and up-date possibilities, the latter being one of the major problems in standard occupational information materials. Representative of the computer efforts (Super, 1970) are the following projects.

1) Computerized Vocational Information System (CVIS), in Willabrook, Illinois. This system utilizes Ann Roe's two-dimensional system described in her book The Psychology of Occupations. Her approach divides occupations into six levels based upon amount of training and degree of responsibility assumed by the worker, and eight categories of interest. The staff does not see this system as a replacement of the counselor but is viewed more as a valuable tool, an automated library and filing system.

2) Educational and Career Exploration System (ECES), in Genesee County School Office, Flint, Michigan. This system is an interactive design allowing the student to converse with the computer and focus on: (1) exploring occupations, (2) exploring major areas of post-high-school study, and (3) seeking the post-high-school educational institution which will best assist him in reaching his career goal. This system was developed by IBM, and originally tested at Montclair High School, New Jersey.

3) Occupation Information Access System (OIAS), under the Career Information System of Oregon, at the University of Oregon, Eugene, Oregon. This system was originally developed under a U. S. Department of Labor grant. This approach utilizes an interactive process called QUEST, featuring a series of questions designed to assist the student in narrowing his field of exploration by identifying areas of interests and capacities. The most unique aspect of the program is a complementary component of the Career Informations System which provides a regular and, as needed, an immediate up-date system. This program is designed to utilize raw data gathered by employment service personnel and then pulled together in a format useable by the computer system for original information files or for up-date purposes.

4) Total Guidance Information Support System (TGISS) in Bartlesville, and Stillwater, Oklahoma. This particular system is designed to ease the load of the counselor in the heavy task of keeping records up-dated and available. This allows the counselor to have immediate access to student records and pertinent information for the purpose of assisting the student in planning his future educational experience.

Other media include the microfilm aperture card using a microfilm reader or a reader-printer. Isaacson (1971:443) describes two such systems.

1) Vocational Information for Education and Work (VIEW). This system was developed by the Department of Education in San Diego County, California. The aperture cards contain four pages of occupational information, two cards for each occupation. The one containing information of a general and national nature, the second, local and regional in nature. The opportunity for up-dating is a part of this system. Reported weaknesses include authenticity, realism, lack of currency and local applicability, and finally some difficulty in filing and retrieving.

2) Vocational Guidance in Education (VOGUE). This system was developed by the Bureau of Occupational Education Research of the New York State Educational Department. The two systems have a similar design and equipment usage. The guides were prepared by the Division of Employment of the New York State Department of Labor. The four page guides include brief descriptions of job duties, physical requirements, interests, aptitudes, wages, hours, future demands, etc. Both systems include approximately 200 titles. The systems are rather easily utilized by students with major cost factors involved in staff time.

The VIEW type system has been adapted in several areas across the nation. Wisconsin developed the Wisconsin Instant Information System for Students and Counselors (WISC). Drier, et al. describe this system as, "A deck of aperture cards containing information on Wisconsin occupations and training schools in microfilm form for use with readers or reader/printers" (1972:149).

Films, filmstrips, slides, and video and audio tapes are becoming more accessible as resources of time and money become more available through Vocational Education Act funds, professional societies, educational institutions, commercial publishers, and business and industrial groups. Some representative titles by media category selected from Drier, et al. (1972) follow.

1) Films:

a) Grades K-3, Community Helper Series, Gahill
Henk Newhouse, Inc.
8 color films - $895
1) "Bakery Beat"
2) "Community Helpers - The Sanitation Department"
3) "Dairy - Farm to Door"
4) "Firemen - On Guard"
5) "Health - You and Your Helpers"
6) "Policemen - Day and Night"
7) "Postman - Rain or Shine"
8) "Truck Farm to Store"

b) Grade K-3
Coronet Films
Helpers at our School
Helpers in our Community
Helpers Who Come to our House
These films deal with occupations which help to operate the schools, the community and provide services in the home.

c) Grades 4-6 & 7-9, Developing Responsibility
Coronet Films
Black & White - $65, Color - $130, 11 minutes
This film provides a view of a boy and his dog, the responsibility, hard work, decisions required, and finally, satisfactions of a job well done.

d) Grades 7-9, Careers for Girls
Bureau of Audio-Visual Instruction
17 minutes.
This is a vocational exploratory film with the objectives of assisting girls in becoming aware of jobs open to women today and the importance of knowing one's interests and abilities as they relate to different occupations.

e) Grades 7-9 & 10-12, Career Series
Doubleday and Company

"Agri-Business"	"Health Service"
"Clerical"	"Leisure Industries"
"Communications"	"Making a Choice"
"Construction"	"Mechanical"
"Education"	"Sales"
"General Service"	"Technicians"
"Government Service"	

This series approaches some of the commonly identified clusters and includes some additional areas related to leisure time and choice.

2) Filmstrips and Slides:

a) Grades K-3, Learning to Live Together Series
ROA's Films
5 filmstrips, $6.50 each
This is a series of five titles designed to teach understanding, tolerance and respect for others. The objective is to assist children in developing wholesome friendships and skills in living with other people.

b) Grades K-3, School Helpers
Audio-Visual Division
Educational Reading Service
$32.50 for 6 filmstrips.
These filmstrips are designed to aid students in becoming aware of the school staff as workers.

c) Grades 4-6, Fathers at Work and Mothers at Work Too
Audio-Visual Division

Educational Reading Service
These are two sets of six filmstrip/slides at $42.00 for a set or $7.00 each.
These filmstrips show six fathers and six mothers working in different occupations.

d) Grades 7-9 & 10-12, Looking Ahead to a Career
Occupational Outlook Service
U. S. Government Printing Office
This set is designed to illustrate occupational changes and provide some indicators of opportunities in industries for the '70's.

3) Tapes and Records:

a) Grades 4-6, 7-9 & 10-12, Career Series
Tapes Unlimited
Gordon Flesch Company, 1970
$85.50 for set of 12; $7.50 each
This series is designed to provide a student with a view of twelve major industries, some of them paralleling clusters which might be available in his school. They provide a rather broad picture of the industry, allowing the student to move toward a more specific decision for in-depth training.
Those industries are:

Construction	Law
Distribution	Mass Communication
Education	Security and Protection
Graphic Arts	Selling
Health Services	Transportation
Hotels, Motels, Restaurants	Industry

b) Grades 7-9 & 10-12, Occupational Interview Cassettes
Imperial International Learning
Carlton Films
This is a series of 50 on-the-job interviews designed to provide the student with a direct contact with the worker or the job situation. These cassettes are probably best used prior to a visit or where visits are impossible or impractical.

4) Simulation, Games, Kits:

a) Grades K-3, DUSO (Developing Understanding of Self and Others) Kit
American Guidance Services, Inc., 1970

This kit is designed to assist in the development of understanding of self and others by primary students. A variety of materials are included, e.g., puppets, posters, story books, role playing cards, etc.

b) Grades 4-6 & 7-9, Job Experience Kits
Science Research Associates
This kit is designed to provide students with problem solving situations typical to some 20 representative occupations through work simulated experiences.

c) Grades 4-6 & 7-9, Life Career-Game
Western Publishing Company, Inc.
This game is designed to assist the instructor in providing students a decision-making experience through information regarding opportunities and alternatives as it relates to a life cycle.

d) Grades 4-6 & 7-9, Widening Occupational Roles Kit (WORK)
Science Research Associates
This kit is designed to increase students' knowledge and understanding of both themselves and the world of work by focusing on the requirements of various occupations. The kit is made up of a combination of 5 color filmstrips, 5 junior guidance booklets, and 400 junior occupational briefs, along with 35 student workbooks and teacher's manual.

e) Grades 7-9 & 10-12, Deciding
College Entrance Examination Board
This program is designed to provide junior and senior high students with a learning experience in decision-making, teaching them the skills of decision-making by focusing on themselves and a potential career.

Additional Sources

The sources identified thus far have included both publishers and developers, and some of the media. However, in attempting to locate pamphlets, journal articles, books, etc. one should be aware of the Vocational Guidance Quarterly (National Vocational Guidance Association, 1960 to --) which regularly lists "Current Occupational Literature" recommended by the Guidance Information Review Service of the National Vocational Guidance Association. This quarterly publication frequently includes the "Career Literature Publisher's Index" in addition to the quarterly list of selected materials.

A recent addition to the family of occupational information sources is the National Career Information Center, a service of the American Personnel and Guidance Association. This service was initiated in August 1972, and includes the Career Resource Bibliography and Inform. These two publications focus on the broad range of available materials, the former identifying various sources of occupational information by cluster or job family categories, e.g., September, 1972 issue emphasizes "Careers in Advertising, Marketing, and Public Relations." The second publication, Inform, features topical areas with valuable tips on current articles or publications. Included is a section in which is listed, by some 20 clusters, current career materials of which single complimentary copies are available to counselor or student upon request.

CRITERIA FOR ASSESSMENT

If the classroom teacher is to be expected to adapt and widely use the myriad of materials flooding the market today, he needs some means of determining which would be most suitable. Time, energy, and money prohibit individuals from taking on this rather awesome task. Thus, an attempt is being made here to provide some guidelines from which to draw.

Suggested Criteria

The National Vocational Guidance Association (NVGA), a division of the American Personnel and Guidance Association, has sponsored the development of the most complete set of guidelines available to date. The initial project focusing on occupational literature began in the 1950's with a later work in the 1960's concerning the development and publishing of films. The latest effort is a booklet entitled, Guidelines for the Preparation and Evaluation of Career Information Media: Films, Filmstrips, and Printed Materials, (National Vocational Guidance Association, 1972).

The abundance of occupational information sources and materials has been noted and quite adequately supported. Typically, however, occupational information is not utilized extensively by students. This demonstrates that simply having the materials within the school is not sufficient; information must be valid, in usable form and seen as valuable by students before it will be used. The ultimate test of the availability and usability in evaluating occupational information would be student utilization. This test would be impossible for each individual instructor to carry out with all materials. However, since use is the best test for applicability, readability and attractiveness to students,

some effort should be made to assess, wherever possible, the use of those materials which are presently on hand as a part of the selection of new materials. If materials are in a library, then a simple checkout system will provide the necessary information. If the material is in a career center then the staff person overseeing the center would be able to provide a logging procedure to determine the utilization of various items. Within the classroom, one of the most effective methods is to have the children assigned jobs modeled after a work station, one of which might be a coordinator of occupational information. A part of the assignment could be an inventory approach with a tally system for times used. Some computer systems have a built-in program for counting uses of the system. Reader-printers of the microfilm variety usually can be set up with a counter attached for checking.

Selection and development of appropriate occupational information presupposes consideration of the needs of the group for whom the materials are intended. This is why a good understanding of career development is necessary. The materials must be appropriate not only to the grade level, reading, etc., but also to the career development level or stage. Isaacson (1971) suggests that accuracy, currency, usability, reader appeal, and thoroughness are basic. However, of equal importance is the appropriateness to the developmental needs of the student.

The content and process of occupational information materials should differ with the level of the target group. Beginning with the preschool and elementary school period, which has been identified as the "awareness period," occupational information should concern general aspects of jobs and require a lesser amount of specific job entry data. More detailed specific information will be needed as one approaches the "specialization period" and the time of actual employment, completing the career education cycle from kindergarten through job entry and on to all levels of occupations throughout life.

Shadbolt (1972) notes that as with other kinds of information, the quality of occupational information varies considerably. Good occupational information is usually up-to-date, accurate, comprehensive, and seeks to inform. Bad occupational information is usually out-dated, exaggerated, incomplete and seeks to persuade. The difficulty is that much of the occupational information possesses both good and bad characteristics and falls somewhere in between.

The recommendations which follow are intended for use as guidelines which can be applied with minimal adaptation to all materials. The guidelines involve a three-fold approach including: (1) content, e.g., specific data about jobs; (2) process, e.g., format, style, and level; and (3) biases, e.g., authorship and sponsorship concerns in selecting occupational information.

Content

The following categories should be included in good occupational information and answer the majority of questions as suggested.

1) Job Duties: This should include a simple clear statement of the activities in which the worker engages on the job.

   a) What does the worker do?
   b) What physical activities are required, e.g., manipulating, lifting, climbing, stooping, crouching, kneeling, etc.?
   c) What kind of decisions does he need to make?
   d) Does he work primarily with people, data or things?

2) Working Conditions: A realistic portrayal of the actual work setting is invaluable and absolutely necessary.

   a) What are the physical surroundings?
   b) What unusual conditions exist, e.g., temperatures, noise level, humidity, fumes, dust, odors, indoors or outdoors?
   c) What relation does one have with other workers: proximity, isolation, verbal communication, etc.?
   d) What type of equipment is used?

3) Qualifications: This statement should include very specific details of all the data a potential worker needs to know in order to enter this occupation, and any requirements beyond the entry-level skill and training.

   a) What skills are required?
   b) What are the minimum entry requirements?
   c) What are the preferred entry requirements?
   d) What level of training is required, e.g., degrees, certification, licensing, etc.?
   e) What are the physical requirements?
   f) What examinations are required, e.g., written, physical?
   g) What are the membership requirements, e.g., union, professional, associations, etc.?
   h) What special personal requirements are there, e.g., observational skills, ability to concentrate, etc.?

4) Job Satisfactions: Because values play such a key role in career decision-making, a clear understanding in this area is vital.

   a) What is the wage rate and wage supplement?

b) What type of responsibility is required?
c) How does this job relate to other jobs with which he will be coming into contact, e.g., income, supervision, shared responsibility, etc.?
d) What are the advancement opportunities?
e) What are the requirements for advancement?

5) Long-Range Outlook: With the job progression or movement from job to job, changing from the "ladder" to "lattice" concept, the opportunity for intra-job movement or inter-job movement within a job family becomes more crucial.

a) What is the location of the hiring establishment?
b) What type and size of establishment is it?
c) What is the future of the immediate industry of which this job is a part?
d) What technological changes are expected that will affect the job?
e) How will population growth affect this position?
f) How will the economic situation affect this position?
g) What are the anticipated job requirement changes?
h) What is the promotional pattern?
i) What are the related opportunities for alternate careers?
j) What processes will lead to these alternatives?

6) Current Labor Market Situation: For the student who is moving into the specialization stage of his training, and for the job searcher, this information has to be accurate and current.

a) How many openings are there now?
b) Where are these openings, e.g., local, state, regional, or national?
c) What are the predicted openings for the next month, six months, one year, three years, or five years?

7) Other Information: In this area, appropriate supplemental materials should be identified.

a) What supplemental materials are identified (books, pamphlets, journals, monographs, films, etc.)?
b) What schools and agencies provide training and opportunities where relevant?
c) What on-the-job, cooperative work experience, work study, part-time employment, etc., are available?
d) What financial aids are available during the training period?

Process

The occupational information may be most accurate and detailed, but unless it is presented in an attractive, interesting way, all the effort will be of little value. Occupational information must be usable by and accessible to persons of varying ability and experience, causing the style and format to be of utmost importance. Some considerations focusing on this aspect of occupational information follow.

1) Readibility: The information should be as free as possible of technical terminology or sophisticated language, so it will not lose the portion of the audience having the greatest need.

   a) What level are you seeking to serve, e.g., elementary, junior high, high school, college, general public, etc.?
   b) What is the reading level of the material?
   c) Is technical jargon defined and clarified?
   d) Is the information concise and to the point?

2) Usability: Motivation is critical and a basic concern in the historical lack of occupational information utilization.

   a) Is the material relevant to the intended age or educational level?
   b) Is the material attractive to the intended audience?
   c) Are the illustrations related to the theme?
   d) Is the content well organized and carefully edited?
   e) Do the illustrations and content reflect an unbiased presentation of sexes and races?

3) Accuracy and Currency: This factor seems almost unnecessary to mention, but has often been overlooked.

   a) Are the occupations depicted fairly and correctly?
   b) What is the publication date (in the case of books, consider the first copyright date)?
   c) Are the photographs and illustrations dated by styles?
   d) Is there a regular updating procedure (NVGA recommends every two years as a minimum)?
   e) Is this information true of the local, county, state, regional or national scene?

(Appendix A contains an evaluation check list for printed occupational information).

Biases

In critiquing occupational information for the purpose of classroom use, there is a third area of consideration which involves research, authorship and sponsorship. Three of five questions which Hoppock (1972) suggests in discussing the appraisal of occupational information have not been answered as yet. They are "who," "how," and "why."

Who collected the data, why was the data collected, and how was it accomplished? The background of persons collecting the data can be a critical factor with regard to their expertise in interviewing and research. Objectivity is essential to produce valid results. If one is to assure impartial research, Shadbolt (1972) emphasizes the need for funding of the rather expensive process of occupational information development. He feels that such is necessary to eliminate the pressure which comes from the sponsoring groups. Unless there is adequate funding, no system will be able to develop the comprehensive bias-free material needed.

The College Educated Workers, 1968-1980, a publication of the U. S. Department of Labor (1970:1-2), provides a good example of an author setting the conditions and assumptions upon which labor market material of this journal was based. "Some Important Facts About Occupational Reports" in the 1972-73 edition of the Occupational Outlook Handbook (U. S. Department of Labor, 1972) illustrates another example of ways in which an author can qualify and even suggest influences which might change job opportunity predictions.

In the case of some materials published by private businesses, professional associations, training institutions, popular magazines, and private research organizations, the recruitment needs of the sponsoring group should be considered as a biasing factor on the data, e.g., menial job duties, routine work, irregular schedules, opting for the glamorous side of the job.

A final consideration would involve the reason for preparing occupational information. Again the needs of the sponsor versus the needs of the user must be considered. For the material to be truly occupational information and not just some more occupational material, the target group (the students) must remain as the primary focus. One means of learning about this all important aspect of occupational information is to check to see if the studied population, sample size, etc., are clearly identified.

In summary, occupational information includes content and process. At all levels, the accuracy of the information is mandatory. The need for detail and specificity of job entry content increased as the user

approaches job seeker status. Concern for the process is pertinent at earlier stages of career development. Awareness of biasing factors is crucial to the teacher who selects and uses occupational information.

OUTSTANDING SOURCES OF CAREER INFORMATION

There is much agreement that change is needed in the approach now utilized in assisting young people to prepare for life beyond their school years, particularly as workers. In fact it has become rather popular to condemn the current educational practices and to ride the "bandwagon" of critics of the teachers and counselors and all other educators for their neglect in training youth in how to make a living. Everyone seems in favor of change unless they are the ones asked to change, particularly their attitudes related to the world of work and the status of different jobs and the workers in them.

In discussing the implementation of a program of career education and development, Hoyt, et al. (1972) indicate some rather clear directions for educators to follow. They suggest that every classroom teacher at every level emphasize the career implications of the content taught. There is an abundance of illustrations and experiences available to the teacher with implications for kindergarten level through graduate school.

As the elementary teacher presents such units as food, transportation, community services, etc., students can be provided the opportunity to identify the various jobs and observe the workers on the job or interact with them in the classroom.

Some instructors in the exploratory programs have students list all the jobs observed on a field trip, starting with the bus driver, workers observed as they travel to the work station, and then those workers at the observation site. Once back in the classroom, the students take each worker listed and classify according to his work on a "data, people, or things" basis. They can be assisted in researching these as extensively as desired with regard to worker traits, entry qualifications, training, licensing, etc.

These contacts with workers can provide an opportunity for every teacher to have an impact on both skill development in data gathering and early stages of decision-making, as well as on work attitudes. An excellent opportunity and a necessary component to consider is the active cooperation and participation of both school and nonschool personnel, as well as the home and occupational community. The parent as a worker from the home, the school as a recognized work setting, and the occupational community allow the teacher to capitalize on the variety of opportunities within the total community.

In presenting outstanding sources of occupational information, there is a need to consider several levels of career education and development, i.e., awareness, orientation/exploration, preparation, specialization, and retraining.

This author sees the most outstanding single occupational source as "people," because of the motivational aspect. (Appendix B contains an evaluation checklist for speakers and/or tour guides.) There is strong evidence regarding the impact of family and the environment of the home on career choice, which lends support for educators to involve the members of the home. This involvement does in fact begin during the preschool years and has considerable impact before the child comes to the school. However, the quantity and quality of the impact is not necessarily consistent, due to the variety of the home conditions. For this reason, not only are the needs of the student as a group important, but also the current situation of the individual student.

Awareness

The awareness stage, K-6, has been identified as the ideal time to develop work values and attitudes. The classroom teacher has a wealth of information at his fingertips beginning with himself in the classroom as a "worker," and the other school personnel, e.g., fellow teachers, custodians, teacher aides, secretaries, and cafeteria workers. The opportunity to help children learn about the "hands that make the school go" allows for the development of an appreciation for the personnel of the school as workers and as contributing members of society.

The opportunity to help a child relate his parents' work as a useful, necessary part of the community and see his parents or some significant adults as contributing members is a valuable contribution to his understanding of the world of work. The significant factor underlying this source is that the teacher has much occupation-related material close at hand and need not change his basic course content substantially, just provide a different emphasis. He need only add the component of "people" to the current areas of teaching. As the students begin to look beyond the school to the community, they can encounter and learn from a wide range of community service workers.

Hoyt, et al. (1972) have presented several assumptions regarding a more balanced view of work and its relationship to life as a basis for career education in early childhood. Drier, et al. (1972) identify some sixteen career development concepts, some of which are basically the same as Hoyt's. They include the following ideas:

1) An understanding and acceptance of self is important throughout life.

2) Persons need to be recognized as having dignity and worth.
3) Occupations exist for a purpose.
4) There is a wide variety of careers which may be classified in several ways.
5) Work means different things to different people.
6) Education and work are interrelated.
7) Individuals differ in their interests, abilities, attitudes and values.
8) Occupational supply and demand has an impact on career planning.
9) Job specialization creates interdependency.
10) Environment and individual potential interact to influence career development.
11) Occupations and life styles are interrelated.
12) Individuals can learn to perform adequately in a variety of occupations.
13) Career development requires a continuous and sequential series of choices.
14) Various groups and institutions influence the nature and structure of work.
15) Individuals are responsible for their career planning.
16) Job characteristics and individuals must be flexible in a changing society (Drier, et al., 1972:13).

Among the assumptions identified by Hoyt, et al. are the following rather controversial statements:

> The work ethic should be taught to and accepted by all students.
>
> All students should make a tentative career choice by the end of kindergarten and should modify or reaffirm this choice periodically throughout the school years (1972:74).

In considering choices of goals at this early age, one might consider Ginzberg's fantasy stage. This can be seen in the child who becomes a cowboy by putting on a hat and pointing a finger. The child becomes an airplane pilot by spreading his arms and making jet-like sounds, a truck driver by making the appropriate motor revving sounds for shifting gears. Thus a child starts with a very specific though tentative choice which may be adjusted daily or several times a day. The orientation and exploration experiences can expose him to the broad range of clusters and thus provide him the basis for narrowing his choice to a particular cluster or clusters for more in-depth experiences before eventually selecting an occupation.

This obviously places a heavy responsibility on the teacher for the development of positive attitudes toward work. Everyone would probably not agree with all the previous statements, but they do serve to emphasize

critical areas for consideration in teaching work values and attitudes in the early grades of school. Well prepared, attractively illustrated supplemental materials including films, tapes, books and printed materials designed to stimulate further interest are needed. Drier, et al. (1972) have provided one of the most complete and extensive compilations of supplemental materials available. These have been categorized by grade level, e.g., K-3, 4-6, 7-9, and 10-12, as well as three areas of emphasis: self, world of work, and career planning and preparation.

The motivational value of direct contact with significant adults from their world of work are of premium value as an occupational information source at this level.

Orientation/Exploration

The orientation/exploration stage, which is inclusive of the middle grades (grades 7-10) is a time when the student begins to function more independently. He is ready to learn data gathering skills and to use the available tools for considering more extensively the world of work. He has the opportunity to begin to exercise some options in school and in fact make some specific career-related decisions. Tyler (1969) notes the need for information about fields of work available in a way in which a student can assimilate it. She further suggests that appropriate information can make a valuable contribution to the student's awareness and analysis of subjective factors related to vocations. Thus, occupational information does serve in the process of orientation/exploration and tentative goal selection.

"People," as an occupational information source, will continue to play a key role at this orientation/exploratory stage of career development. Many approaches have been utilized to bring the real life work experiences into the classroom. One approach involves the establishment of business-like operations, e.g., stores, corporations, etc., with job assignments by title within an individual classroom or a total school. Teachers can bring resource people in who can help make the experience as real as possible. However, every student should have the opportunity during this stage to be exposed to a worker in a real live job situation. He needs the opportunity to see the job first hand and to visit directly with the worker. Wherever possible, he should spend some time with a worker in an area of keen interest. This experience would assist him in gaining a clearer understanding of and need for skills in considering various types of jobs and job facts.

A class entitled SUTOE (Self Understanding Through Occupational Exploration) is an example of an experience used in Oregon which teaches a student "what to watch," "how to watch," "who to watch," as well as

"where to go to see it." Included in the experience are opportunities to learn interviewing skills, resume writing, and how to use such resources as the Dictionary of Occupational Titles for considering jobs on a data-people-things basis. The Dictionary of Occupational Titles, (U. S. Department of Labor, 1965) and Occupational Outlook Handbook (U. S. Department of Labor, 1972) are among those resources which can be available in the classroom which would be valuable for before and after on-site visit references.

Stimulating activities with high motivation value involving career-oriented games, simulations and decision-making processes fit the process orientation of this stage. Information at this stage should continue to focus with job duties, environment, and rewards, with wages presented in ranges. Some experimental approaches are in progress for spending more extensive amounts of time in cluster areas with some hands-on experiences.

Preparation

At the preparation stage, grades 11-12, occupational information must include rather complete data which means accurate, current and localized data with particular consideration for some indicators of job prospects within a three to five year period.

The student should arrive at the preparation stage with a rather complete understanding of the world of work and a clear concept about the full range of clusters (job families) as well as many of the specific jobs within several clusters. This is a period when the student will be experiencing "hands-on" activities both in the school laboratory and on the job. This means he will be developing a personal and direct contact with the primary source of occupational information - the worker himself. However, other detailed and more complete information will still be needed.

One source which may best meet this need is the computer system. The factor which makes this program attractive is its unique capacity for an ongoing process of information development and updating, meeting key criteria of accuracy and currency. The Career Information System (CIS) in Oregon is an example of this approach. This system utilizes employment office manpower economists staff who feed data to the labor market analyst of the CIS who in turn coordinates this effort and adapts the data to the form utilized. In addition, this system provides a process for self-assessment which should aid the student in considering and narrowing the potential occupations in the decision-making process. In addition, the need for job-getting skills becomes important. Films and filmstrips have been used successfully as aids in this process.

Specialization

In the specialization stage, post-secondary, the previously mentioned career information system which provides immediately accessible, updated, localized occupational information best meets the requirements of persons looking at the job market. However, a wide range of materials are valuable during this period since post secondary students are at such divergent levels in age, experience and career development. Some returning-to-school adults, particularly women who have been giving all of their energies to raising a family, are just beginning to explore careers seriously and need some general information. Others are ready to enter the job market tomorrow and need the latest specific data available. The whole range of materials should be represented in a Career Information Center and provided as appropriate to the needs of the individual from exploratory through job entry.

In summary, the primary source of occupational information available to the classroom teacher is people. This does not imply that all persons, even in their own field, will give totally accurate information. However, because of the motivational impact, particularly in the awareness and exploration stages, the value is high. This resource is available at all levels and stages of development, beginning with the parent, teacher, community worker and advancing to the total occupational community. A second outstanding information source which must be considered is a Career Information system. This is recommended where individuals are needing a greater range of information in more detail. This can include information which is dated and changeable, therefore needing regular up-dating. This is critical for persons soon to face the job market. Supplemental sources were identified as Dictionary of Occupational Titles (U. S. Department of Labor, 1965) and Occupational Outlook Handbook (U. S. Department of Labor, 1972).

This narrowed group of information sources is not intended to devalue the many other sources. However, these are seen as best meeting specific needs at particular stages of career development.

Areas of Weakness

Outdated Materials. The stacks of materials sitting in libraries and counselor offices across the country attest to the glaring problem of outdated materials. The most significant weakness seems to be the lack of careful screening and reviewing of these materials. Hoppock calls attention to the problem.

> Most counselors maintain a file of occupational pamphlets, to which new materials are added periodically, and from which no one ever throws anything away. Examination of one such file revealed 900 pamphlets that were more than five years old. Of these, over 300 were ten years old, 20 were over twenty years old, and a few had been published over thirty years before (1967:45).

While this, one would hope, is a rather extreme example, the author has had more than one experience of asking counselors about the occupational files only to be directed to the library and then to have the librarian be unfamiliar with such files.

One of the compounding problems of having current materials is the method of development of materials. There has been some indication of change recently in this area. As the current emphasis on career education continues to have its impact, there seems to be more consideration given to the development of materials to fit the various age or developmental levels of students. Particularly in the case of the awareness period, for example, there is little need to include information which is likely to become dated.

The standards and guidelines which have been developed by NVGA appear to be receiving more attention from developers, thus datedness and relevancy are given more consideration.

Resource People. An area which is just beginning to receive attention but is still rather weak in some areas of the country is the preparation of personnel from the occupational community. Some tour guides of business and industry for student groups have been ill-prepared in at least two ways. One is their lack of awareness of how to speak with students of different age groups, and the other is their lack of awareness of what the students need to know about the particular work situation related to their stage of career development. The school personnel must share responsibility in this regard and need to spend time with members of the occupational community in aiding them to see what is needed and to begin to consider the particular developmental level of the students who will be coming. (Appendix B contains an evaluation checklist for speakers and job-site tour guides.) Currently there is some interest on the part of the community groups to make themselves not only more available but also more knowledgeable. An example of this practice is reflected in the Lane County of Oregon where a Visit File has been developed cooperatively between the schools and the local Rotary Club, a part of the CIS. This provides for a knowledgeable worker to be available to speak individually with a student regarding the particular occupational field as a followup of his earlier career exploration.

In summary, the major weakness in many occupational information systems is the ever growing file of material that is not reviewed regularly and kept current. There is always the danger of providing information that is not relevant to the developmental level of students or is slanted from a recruitment bias.

APPENDIX A

OCCUPATIONAL INFORMATION EVALUATION CHECKLIST

A. Content

	S	F	U	NA	
1.	___	___	___	___	Job Duties (nature of work, work activities)
2.	___	___	___	___	Working Conditions (environment, setting, hours, type of people, etc.)
3.	___	___	___	___	Qualifications (skills, training, licenses, experiences, aptitudes, physical capacities)
4.	___	___	___	___	Job satisfactions (advantages, disadvantages, etc.)
5.	___	___	___	___	Employment prospects (supply and demand, current and long range outlook, trends)
6.	___	___	___	___	Earnings (wage range, rates and supplements, promotional opportunities, other benefits)
7.	___	___	___	___	Scope of information (national, regional, state, and local)
8.	___	___	___	___	Related occupations
9.	___	___	___	___	Additional sources

B. Process

1.	___	___	___	___	Currency and accuracy (date of publication, illustrations, provision for up-date)
2.	___	___	___	___	Style (clear, concise, illustrations and charts)
3.	___	___	___	___	Appropriateness (reading level, technical jargon clarified, interest level, age/grade level)
4.	___	___	___	___	Biases (authorship or sponsorship identified, recruitment oriented)

S - Satisfactory
F - Fair
U - Unsatisfactory
NA - Not Applicable

APPENDIX B

SPEAKER'S OR TOUR GUIDE*

	S	F	U	NA	
1.	___	___	___	___	Was he aware of age-level, developmental level, and interest level of the group?
2.	___	___	___	___	Was he prepared to describe what his job is like, e.g., a typical day, what he does, his work setting, etc.?
3.	___	___	___	___	Was he prepared to discuss personal satisfactions and dissatisfactions connected with his occupation, along with such items as contribution of his work to society, social obligations, type of people with whom he works, conditions under which he works, organizations he must join, etc.?
4.	___	___	___	___	Was he prepared to discuss the training needed for his occupation, what he did prior to this job, and which of these were helpful in obtaining the job?
5.	___	___	___	___	Was he prepared to discuss the rewards of the job in terms of wage ranges, opportunities for advancement, changes occurring in his occupation?

*Adapted from the Career Information System unpublished paper, "Central Questions for a Vocational Interview."

S - Satisfactory
F - Fair
U - Unsatisfactory
NA - Not Applicable

APPENDIX C

Names and Addresses of Selected Publishers and Sources of Career Development Materials

American Academy of Pediatrics
P. O. Box 1034
Evanston, Ill. 60204

American Guidance Service
Publishers Building
Circle Pines, Minn. 55014

American Personnel and Guidance Association
1605 New Hampshire Ave., N.W.
Washington, D. C. 20009

B'nai B'rith Vocational Services
1640 Rhode Island Ave., N.W.
Washington, D. C. 20036

Bureau of Audio Visual Instruction
1327 University Ave.
P. O. Box 2093
Madison, Wis. 53701

Career Information Service
Southeastern Reg. Voc.-Tech. School
250 Foundry Street
South Easton, Mass. 02375

Career Planning Center
Placement Services
3200 Student Activities Bldg.
University of Michigan
Ann Arbor, Mich. 48104

Careers, Inc.
P. O. Box 135
Largo, Florida 33450

Chronicle Guidance Publishing, Inc.
Moravia, New York 13118

Coronet Films
65 E. South Water Street
Chicago, Ill. 60601

Doubleday and Co.
School and Library Division
Garden City, New York 10003

Education Reading Service
320 Route 17
Nahwah, New Jersey 07430

Gordon Flesch Co.
225 Beltline Highway, N.
Madison, Wis. 53713

Guidance Associates
Pleasantville, New York 10570

Henk Newenhouse, Inc.
1825 Willow Road
Northbrook, Ill. 60093

Imperial International Learning
P. O. Box 548
Kankakee, Ill. 60901

Manpower Administration
U.S. Department of Labor
Washington, D. C. 20210

National Association of Manufacturing
277 Park Avenue
New York, New York 10017

National Association of Trade and Technology Schools
2021 L. St., N.W.
Washington, D. C. 20036

National Center for Audio Tapes
University of Colorado
Stadium Bldg., Room 319
Boulder, Colo. 80302

National Committee for Careers
in Medical Technology
1501 New Hampshire Ave., N. W.
Washington, D. C. 20036

National Voc-Guidance Assoc.
1607 New Hampshire Ave., N. W.
Washington, D. C. 20009

Occupational Outlook Service
Bureau of Labor Statistics
U. S. Department of Labor
Washington, D. C. 20212

R.O.A.'s Films
1696 North Astor Street
Milwaukee, Wis. 53202

San Diego County
Department of Education
Audio Visual Service
San Diego, California 92101

Science Research Associates
259 East Erie Street
Chicago, Ill. 60611

U. S. Government Film Service
U. S. Office of Education
DuArt Film Laboratories
245 West 55th Street
New York, New York 10019

U. S. Government Printing Office
Superintendent of Documents
Washington, D. C. 20402

Western Publishing Company
850 Third Ave.
New York, New York 10022

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[1]Bibliographical entries followed by an ED number are generally available in hard copy or microfiche through the Educational Resources Information Center (ERIC). This availability is indicated by the abbreviations MF for microfiche and HC for hard copy. Order from ERIC Document Reproduction Service (EDRS), P.O. Drawer O, Bethesda, Maryland 20014. Payment must accompany orders totaling less than $10.00.

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DESCRIPTORS - *Resource Guides; *Occupational Information; *Career Education; *Information Sources; *Evaluation Criteria; Resource Materials; Media Selection; Decision Making Skills; Career Choice; Vocational Counseling.

ABSTRACT - The recent trend toward a greater emphasis on career education for life preparation has brought with it the need for more accurate and appropriate information about self, environment, and the world of work. This publication was prepared to help the classroom teacher in identifying and assessing the various types and sources of occupational information available from government agencies, publishers, organizations, schools, and other sources. It is not intended to be an exhaustive compilation of all available materials but rather to provide representative titles in the various resource areas as well as media for presenting occupational information. The contents provide an overview of the role of occupational information in career education and career development. Included are illustrations of a decision-making model and a career education model. Occupational information sources are identified, as are guidelines for assessment of the information. (MF)